

Remarks

Claims 1-8, 17-26, 28 and 31-32 are pending.

The Examiner rejected Claims 1, 4-8, 17, 20-22, 25-28 and 31-32 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,864,753 ("Morita"), in view of U.S. Patent 5,640,696. With respect to Claims 1 and 17 the Examiner states:

Regarding claims 1 and 17, Morita discloses a radio receiving system and a method of tuning a mobile radio system comprising: (see Fig. 1), a location unit (navigation unit 26), a wireless interface to a wide area network (communication unit 18), a frequency selection unit coupled to receive a current location from the location unit (see col. 2, lines 32-37), in response to a change (user obtaining data concerning a new radio station by sending his current position to the base station when the base station travels to a new area where the previously identified radio station is not accessible, col. 2, lines 38-43), wherein the frequency selection unit retrieves over the wireless interface, tuning data representing a set of frequencies of broadcast signals " that can be received at the current location form a data storage system associated with a server on the wide area network and further selects a frequency from the set of frequencies of broadcast signals in the tuning data retrieved (see col. 4, lines 24-30), the tuning data retrieved having been filtered according to a previously determined set of selection criteria based on user content preferences (controller providing base station with request messages as sequential data reflecting the plurality of programs the driver wants to listen to, see col. 4, lines 9-24), and provides the selected frequency as input to the radio receiver (see col. 4, lines 30-39). Morita fails to explicitly teach that the frequency selection is in response to a change in signal strength in the broadcast signal received by the receiver.

In an analogous field of endeavor, Ishikawa discloses an automatic station selection and receiving apparatus in which broadcasting stations with their corresponding broadcasting frequencies for a particular regions are stored in a memory unit from which stations (see col. 3, lines 32-53). According to Ishikawa, when a when it is judged that the level of a signal being received is judged is not higher than a predetermined threshold level, a new broadcasting station is re-selected in order to select an appropriate station, which prevents a user from listening to a degraded station signal (see col. 4, lines 11-40, col. 8, line 6 to

col. 9, line 6).

It would therefore have been obvious to one of ordinary skill in the art to combine Ishikawa's broadcasting station selection system with Morita's radio tuning system in order to ensure the selection of high quality broadcasting stations for listening as taught by Ishikawa.

Applicant respectfully traverses the Examiner's rejection. Claims 1 and 17 each recite that the frequency selection responds to change in signal strength received by the radio receiver:

1. A radio signal receiving system comprising:

a location unit;

a wireless interface to a wide area network;

a radio receiver tuned to receive a broadcast signal based on a selected frequency provided as input to the radio receiver; and

a frequency selection unit coupled to receive a current location from the location unit wherein, in response to a change in strength in the broadcast signal received by the radio receiver, the frequency selection unit (1) retrieves, over the wireless interface, tuning data representing a set of frequencies of broadcast signals that can be received at the current location from a data storage system associated with a server on the wide area network, the tuning data retrieved having been filtered according to a previously determined set of selection criteria based on user content preferences, and (2) further selects a frequency from the set of frequencies of broadcast signals in the tuning data retrieved and provides the selected frequency as input to the radio receiver.

* * *

17. A method of tuning a mobile radio system, comprising the acts of:

receiving from a location unit location information that identifies a current position of the system;

in response to a change in strength in a broadcast signal received at a radio receiver, retrieving over a wireless interface to a wide area network tuning data representing a set of frequencies of broadcast signals that can be received at the current location from a data storage system associated with a server on the wide area network, the tuning data having been filtered according to a previously determined selection criteria based on user content preferences;

in a frequency selection unit, further selecting a particular frequency from the tuning data retrieved; and

using the particular frequency to tune the radio receiver to receive the broadcast signal at the particular frequency.

(emphasis added)

As explained in Applicant's Specification at page 8, lines 23-31, selecting a new frequency in response to received signal strength allows a listener to continue to receive his desired content without interruption, as the listener travels from one station's area of coverage to another. Morita does not teach responding to the signal strength at the receiver. In fact, to the contrary, Morita specifically teaches, at col. 4, lines 9-15, that a change in station is prompted by area information and current position data:

When the controller 14 determines that the vehicle 100 is not running in an area where the desired program is receivable, on the basis of area information from the base station 200 and the current position data from the navigation unit 20, the radio station tuning system may be configured such that it automatically has access to a nearest base station unless the driver does not input a new request.

At col. 1, lines 47-54 and col. 2, lines 1-11, Morita explains that the purpose his radio receiver operating in this manner is to specifically allow a user to be able to listen to a desired program, even when stations broadcasting the same genre all day long are available in the same area:

The present invention is conceived so as to overcome

the foregoing problems of the prior art, and is intended to provide a radio station tuning system, which enables a radio receiver to be tuned to a radio station offering a program of a desired kind even when a driver or listener is present in an area where a plurality of radio stations offer ordinary programs.

A user informs the base station of his desired radio program (i.e. a request message) using the first transmitter. The base station searches for, from a data base, a radio station which is offering or is going to offer the requested program, and provides the first receiver with data concerning a frequency of the radio station and broadcasting time. The radio receiver will be tuned to the radio station which offers the desired program. The driver can easily enjoy his desired program such as music at a specified time, even when there are few radio stations which offer programs of specific kinds all day long.

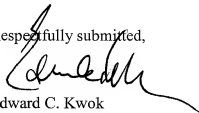
Thus, if one modifies Morita in the direction of Ishikawa, as the Examiner suggested, the result would be the radio receiver interrupting the user's desired program when the power of the station broadcasting the desired program falls below a threshold. Such a modification would therefore render Morita unsatisfactory for its stated purpose. Accordingly, as discussed in MPEP § 2143.01 (v), there is no suggestion or motivation for such a modification. Accordingly, Applicant respectfully submits that Applicant's Claims 1 and 17, and therefore dependent Claims 4-8, 20-22, 25-26, 28 and 31-32 also, are each allowable over Morita and Ishikawa. Reconsideration and allowance of Claims 1, 4-8, 20-22, 25-26, 28 and 31-32 are therefore requested.

The Examiner rejected Claims 2-3, 18-19 and 23-24 under 35 U.S.C. § 103(a) as being unpatentable over Morita and Ishikawa, as applied to Claims 1 and 17 above, in further view of U.S. Patent 6,374,177 ("Lee"). Applicant respectfully traverses the Examiner's rejection. Claims 2-3, 18-19 and 23-24 each depend from Claims 1 and 17, respectively. As the Examiner's modification of Morita in the direction of Ishikawa is unwarranted, rendering Morita unsatisfactory for its stated purpose, Claims 2-3, 18-19 and 23-24 are each believed allowable over the combined teachings of Morita, Ishikawa and Lee for at least the reason set

forth above with respect to Claims 1 and 17. Reconsideration and allowance of Claims 2-3, 18-19 and 23-24 are therefore requested.

All pending claims (i.e., Claims 1-8, 17-26, 28 and 31-32) are believed allowable over the art of record. If the Examiner has any question regarding the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicant at 408-392-9250.

Respectfully submitted,



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